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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,224	11/26/2003	Chc-Li Lin	LEE0028-US	5691

7590 08/30/2005  
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EXAMINER

GARY, ERIKA A

ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/721,224

Applicant(s)

LIN ET AL

Examiner

Erika A. Gary

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,10,12 and 13 is/are rejected.
- 7) ☒ Claim(s) 3,4,8,9,11 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: in part (b), "a second feedback weight" should be "a second channel feedback weight". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5-7, 10, 12, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Hottinen et al., US Patent Number 6,584,161 (hereinafter Hottinen).

Regarding claims 1 and 10, Hottinen discloses a method (and apparatus) for a mobile unit determining a data transmit diversity mode of a base station in a wireless communication system, comprising: estimating a first channel feedback weight of said mobile unit during a first time slot, said first channel feedback weight having a first feedback phase; estimating a second feedback weight of said mobile unit during a second time slot, said second channel feedback weight having a second feedback phase; and determining said data transmit diversity mode of said base station according

to said first feedback phase and said second feedback phase [col. 4: lines 37-52; col. 5: lines 56-64; col. 6: lines 7-17; col. 9: lines 44-55].

Regarding claim 2, Hottinen discloses obtaining a phase difference of said first feedback phase and said second feedback; and determining said data transmit diversity mode of said base station according to said phase difference [col. 8: lines 23-40; col. 9: lines 20-24].

Regarding claims 5 and 12, Hottinen discloses a method (and apparatus) or a mobile unit determining a data transmit diversity mode of a base station in a wireless communication system, comprising: calculating a tune weight of said mobile unit corresponding to a signal received from said base station during a current time slot, said tune weight having a tune phase; estimating a feedback weight of said mobile unit during said current time slot, said feedback weight having a feedback phase; and determining said data transmit diversity mode of said base station according to said tune weight and said feedback weight [col. 4: lines 37-52; col. 5: lines 56-64; col. 6: lines 7-17; col. 9: lines 44-55].

Regarding claims 6 and 13, Hottinen discloses said tune weight is a difference of a channel signal from a common pilot channel and a pilot symbol of a dedicated physical channel of said base station [col. 9: lines 24-40].

Regarding claim 7, Hottinen discloses obtaining a phase difference of said tune phase and said feedback phase; and determining said data transmit diversity mode of said base station according to said phase difference [col. 8: lines 23-40; col. 9: lines 20-24].

***Allowable Subject Matter***

4. Claims 3, 4, 8, 9, 11, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al., US Patent Number 6,892,059, disclose closed loop transmitting antenna diversity.

Pajukoski et al., US Patent Number 6,839,326, disclose antenna phase estimation for WCDMA closed loop transmitter antenna diversity system.

Raghothaman, US Patent Application Number 2003/0003873, discloses verifying closed loop feedback antenna weighting at a communication station utilizing transmit diversity.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erika A. Gary whose telephone number is 571-272-7841. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EAG  
August 25, 2005

  
ERIKA A. GARY  
PRIMARY EXAMINER